

USPTO Customer No. 25280  
Serial No: 10/679,217

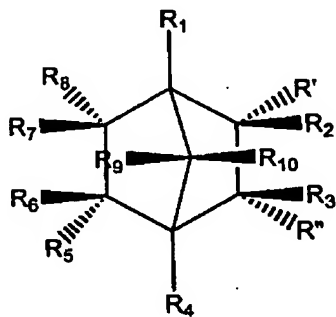
Inventor(s): Mannion et al  
Case No: 5646

### IN THE CLAIM

1. (Currently Amended) An additive formulation comprising: ~~an anti-caking agent and a small size nucleating compound, said composition further comprising~~

(a) at least one nucleating compound conforming to the structure of Formula (I)

(I)



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, and R<sub>10</sub> are independently selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>9</sub> alkyl, hydroxy, C<sub>1</sub>-C<sub>9</sub> alkoxy, C<sub>1</sub>-C<sub>9</sub> alkyleneoxy, amine, and C<sub>1</sub>-C<sub>9</sub> alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to nine carbon atoms;

wherein R' and R'' are the same or different and are individually selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>30</sub> alkyl, hydroxy, amine, polyamine, polyoxyamine, C<sub>1</sub>-C<sub>30</sub> alkylamine, phenyl, halogen, C<sub>1</sub>-C<sub>30</sub> alkoxy, C<sub>1</sub>-C<sub>30</sub> polyoxyalkyl, and esters; and

wherein said nucleating compound is provided in the form of particles, said particles having a D<sub>95</sub> size range of less than or equal to about 94 micrometers at a mean volume diameter (MVD) of about 16; and

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(b) an anticaking agent, said ~~wherein said~~ anti-caking agent comprising ~~es~~ one or more of a group consisting of: silica gel; talc, dihydrotalcite; and metal carboxylates ~~acids~~;

and

wherein said anticaking agent is provided in a weight ratio of anticaking agent to nucleating compound of from about 10:90 to about 30:70.

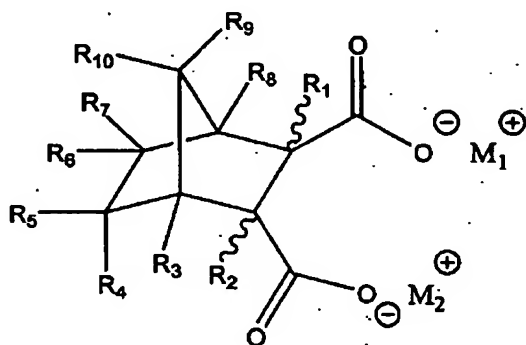
2. (Currently Amended) An additive formulation, wherein said additive formulation comprises in part;

(a) -an anti-caking agent and

(b) a small-size nucleating compound, wherein

said small size nucleating compound conforms ~~ring~~ to the structure of:

Formula (II)



wherein  $M_1$  and  $M_2$  are the same or different and are independently selected from the group consisting of metal ~~or organic~~ cations; and

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R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, and R<sub>10</sub> are independently selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>9</sub> alkyl, hydroxy, C<sub>1</sub>-C<sub>9</sub> alkoxy, C<sub>1</sub>-C<sub>9</sub> alkyleneoxy, amine, and C<sub>1</sub>-C<sub>9</sub> alkylamine, halogen, phenyl, alkylphenyl, and C<sub>1</sub>-C<sub>9</sub> carbocyclic wherein said metal cations are selected from the group consisting of calcium, strontium, barium, magnesium, aluminum, silver, sodium, lithium, rubidium, and potassium.

wherein said nucleating compound is provided in the form of particles, said particles having a D95 size range of less than or equal to about 94 micrometers at a mean volume diameter (MVD) of about 16; and

wherein said anti-caking agent comprises one or more of a group consisting of: silica gel; talc, dihydrotalcite; and metal carboxylates, acids; and

wherein said anticaking agent is provided in a weight ratio of anticaking agent to nucleating compound of from about 10:90 to about 30:70.

3. (Cancelled)

4. (Currently Amended) The additive formulation of Claim 2 wherein said metal cation is calcium.

5. (Currently Amended) The additive formulation of Claim 3 wherein said metal cation comprises sodium.

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6. (Cancelled).
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Previously Amended) The formulation of Claim 2 wherein said anticaking agent comprises a silica gel.
12. (Currently Amended) A thermoplastic article comprising the additive formulation of Claim 1, said article further comprising at least one polyolefin.
13. (Currently Amended) A thermoplastic article comprising the additive formulation of Claim 2, said article further comprising and at least one polyolefin.
14. (Cancelled).
15. (Cancelled).
16. (Previously Amended) The additive formulation of claim 1 wherein said small size nucleating compound comprises disodium bicyclo [2.2.1] heptane-2,3-dicarboxylate.
17. (Previously Amended) The additive formulation of claim 11 wherein said small size nucleating compound comprises disodium bicyclo [2.2.1] heptane-2,3-dicarboxylate.

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18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Previously Presented) The additive formulation of claim 1 wherein said particles comprise a D95 size of less than or equal to about 10 microns at a mean volume diameter (MVD) of about 7.5.

22. (Currently Amended) The additive formulation of claim 21 wherein said anticaking agent and small size nucleating ~~or~~ compound are provided in a ratio of nucleating ~~or~~ compound to anticaking agent of about 80:20.

23. (Currently Amended) The additive formulation of claim 21 wherein said nucleating ~~or~~ compound and anticaking agent are provided in a ratio of nucleating ~~or~~ compound to anticaking agent of about 80:20.